|                   | Material Comp<br>© Copyright 2005. I<br>international and Par | <b>OSITION Dec</b><br>PC, Bannockb<br>n-American co | c <b>laration</b><br>ourn, Illinois. A<br>opyright conver | Il rights reserved untions. | under both              | This docume<br>level parts, t                                       | ent is a declara<br>he declaration | ation c<br>1 encor | of the substances<br>mpasses all lowe | within th<br>r level ma         | e manufactur<br>aterials for wi | er listed i<br>hich the n | tem. Note:<br>nanufactur | : if the item is an as<br>rer has engineering | sembly with lowe responsibility. |  |
|-------------------|---------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------|-----------------------------|-------------------------|---------------------------------------------------------------------|------------------------------------|--------------------|---------------------------------------|---------------------------------|---------------------------------|---------------------------|--------------------------|-----------------------------------------------|----------------------------------|--|
| 1752-21.1         |                                                               |                                                     |                                                           |                             | Form Type<br>Distribute | e * Declaration Class *<br>Class 6 - RoHS Yes/No, Homogeneous Mater |                                    |                    |                                       |                                 | neous Materi                    | ials and Mfg Information  |                          |                                               |                                  |  |
| Supplier          | r Information                                                 |                                                     |                                                           |                             |                         |                                                                     |                                    |                    |                                       |                                 |                                 |                           |                          |                                               |                                  |  |
| Company name* Com |                                                               |                                                     |                                                           | Company unique ID           |                         |                                                                     | Unique ID Authority                |                    |                                       |                                 |                                 | Response Date*            |                          |                                               |                                  |  |
| onsemi            |                                                               |                                                     |                                                           |                             |                         |                                                                     |                                    |                    |                                       |                                 |                                 | 2024-05-03                |                          |                                               |                                  |  |
| Contact Name      |                                                               |                                                     | Title - Contact                                           |                             |                         |                                                                     | Phone - Contact*                   |                    |                                       |                                 |                                 | Email - Contact*          |                          |                                               |                                  |  |
| Product-E         | Env-Stewards                                                  |                                                     | Product Enviro Compliance                                 |                             |                         |                                                                     | NA                                 |                    |                                       |                                 | Product-Env-Stewards@onsemi.com |                           |                          |                                               |                                  |  |
| Authorized        | d Representative*                                             | Title - Representative                              |                                                           |                             |                         | Phone - Representative*                                             |                                    |                    |                                       | Email - Representative*         |                                 |                           |                          |                                               |                                  |  |
| Product-E         | Env-Stewards                                                  | Product Enviro Compliance                           |                                                           |                             |                         | NA                                                                  |                                    |                    |                                       | Product-Env-Stewards@onsemi.com |                                 |                           |                          |                                               |                                  |  |
|                   | Requester Item Number                                         | Number Mfr Item Name                                |                                                           |                             |                         | Effective Date Version Manufacturing S                              |                                    | uring Site         | Weight*                               |                                 | UOM                             | Unit Type                 |                          |                                               |                                  |  |
|                   | 2SA2039                                                       |                                                     |                                                           | H BIP PNP 5A 50V            |                         |                                                                     | 2024-05-03 CNG                     |                    |                                       | :                               | 326.16 m                        |                           | Each                     |                                               |                                  |  |
| Aanufao           | cturing Proccess Informa                                      | tion                                                |                                                           |                             |                         |                                                                     | •                                  |                    |                                       |                                 |                                 |                           |                          |                                               |                                  |  |
|                   | Terminal Plating / Grid Array Material                        |                                                     | Cerminal Base Alloy J-STD-02                              |                             | J-STD-020 MSI           | L Rating                                                            | Peak Process Body                  |                    | Body Temperature Max Time at Peak     |                                 | Temperature Number              |                           | nber of Reflow Cyc       | les                                           |                                  |  |
| contains Bi       |                                                               |                                                     | CU Alloy NA                                               |                             |                         |                                                                     | 0 C 30                             |                    |                                       |                                 | seconds 3                       |                           |                          |                                               |                                  |  |
| Comments          |                                                               |                                                     |                                                           |                             |                         |                                                                     |                                    |                    |                                       |                                 |                                 |                           |                          |                                               |                                  |  |
|                   |                                                               |                                                     |                                                           |                             |                         |                                                                     |                                    |                    |                                       |                                 |                                 |                           |                          |                                               |                                  |  |
| or more i         | information regarding material                                | composition                                         | please refer to                                           | page 3                      |                         |                                                                     |                                    |                    |                                       |                                 |                                 |                           |                          |                                               |                                  |  |

| RoHS Material Composition Declaration                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |              | Declaration Type *                              | Detailed                                     |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------|-------------------------------------------------|----------------------------------------------|--|--|--|--|--|--|--|
| Directive 2015/863/EU amending RoHS<br>Directive 2011/65/EU                                                                                                                                                                                                                                                                                                                                | IS RoHS Definition: Quantity limit of 0.01% by mass (100 PPM) in homogeneous material for Cadmium and quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr6+), Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE), and Bis(2-ethylhexyl) phthalate (DEHP), Benzyl-butyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |              |                                                 |                                              |  |  |  |  |  |  |  |
| cadmium, hexavalentchromium, polybromina<br>contains a RoHS restricted substance inexces<br>encompass all such components. Supplier cer<br>as of the date that Supplier completes this for<br>Company acknowledges that Supplier may h<br>independently verified information provided<br>certification in this paragraph. If the Company<br>that agreement, will be the sole and exclusive | lease indicate whether any homogeneous material (as defined by the RoHS Directive, EU 2011/65/EU and implemented by the laws of the European Union member states) of the part identified on this form contains lead, mercury, admium, hexavalentchromium, polybrominated biphenyls and/or polybrominated diphenyl ethers (each a "RoHS restricted substance") in excess of the applicable quantity limit identified above. If a homogeneous material within the part ontains a RoHS restricted substance inexcess of an applicable quantity limit, please indicate below which, if any, RoHS exemption you believe may apply. If the part is an assembly with lower level components, the declaration shall ncompass all such components. Supplier certifies that it gathered the information it provides in this form using appropriate methods to ensure its accuracy and that such information is true and correct to the best of its knowledge and belief s of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products with European Union member state laws that implement the RoHS Directive Company acknowledges that Supplier may have relied on informationprovided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not idependently verified information provided by others, Supplier agrees that, at a minimum, itsuppliers have provided certifications regarding their contributions to the part, and those certifications are at least as comprehensive as the ertification in the sole and exclusivesource of the Supplier remedies provided as part of hat agreement, will be the sole and exclusivesource of such written agreement with respect to the identified part, the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of hat agreement, will be the sole and exclusivesource of such written agreement, the 'arranty rights and/or re |                                                |              |                                                 |                                              |  |  |  |  |  |  |  |
| RoHS Declaration * 4 - Item(                                                                                                                                                                                                                                                                                                                                                               | s) does not contain RoHS restricted subst                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ances per the definition above except for sele | ected exempt | ions Supplier Acceptance                        | * Accepted                                   |  |  |  |  |  |  |  |
| Exemption: 7a: Lead in high melting temp                                                                                                                                                                                                                                                                                                                                                   | erature type solders (i.e. lead based sol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | der alloys containing 85% by weight or m       | ore lead).   |                                                 |                                              |  |  |  |  |  |  |  |
| Exemption List Version                                                                                                                                                                                                                                                                                                                                                                     | EL-2011/534/EU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |              |                                                 |                                              |  |  |  |  |  |  |  |
| Declaration Signature                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |              |                                                 |                                              |  |  |  |  |  |  |  |
| Instructions: Complete all of the required<br>Requester) and click on Submit Form to h                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                | e drop-dowi  | a. This will display the signature area. Digita | lly sign the declaration (if required by the |  |  |  |  |  |  |  |
| Supplier Digital Signature                                                                                                                                                                                                                                                                                                                                                                 | astislav Drska                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Le                                             |              |                                                 |                                              |  |  |  |  |  |  |  |

## Homogeneous Material Composition Declaration for Electronic Products

SubItem Instructions: The presence of any JIG Level A or B substances must be declared. [1] indicate the subpart in which the substance is located, [2] provide a description of the homogeneous material [3], enter the weight of the homogeneous material.

| Homogeneous Material | Weight | Unit of Measure | Level    | Substance                    | CAS              | Exempt | Weight   | Unit of Measure |
|----------------------|--------|-----------------|----------|------------------------------|------------------|--------|----------|-----------------|
| Die                  | 0.33   | mg              | Supplier | Silicon (Si)                 | 7440-21-3        |        | 0.33     | mg              |
| Die Attach Solder    | 0.15   | mg              | Supplier | Silver (Ag)                  | 7440-22-4        |        | 0.0038   | mg              |
|                      |        |                 | А        | Lead (Pb)                    | 7439-92-1        | 7a     | 0.1388   | mg              |
|                      |        |                 | Supplier | Tin (Sn)                     | 7440-31-5        |        | 0.0075   | mg              |
| Lead Frame           | 191.37 | mg              | Supplier | Silver (Ag)                  | 7440-22-4        |        | 0.3827   | mg              |
|                      |        |                 | Supplier | Tin (Sn)                     | 7440-31-5        |        | 0.2679   | mg              |
|                      |        |                 | Supplier | Copper (Cu)                  | 7440-50-8        |        | 190.7193 | mg              |
| Mold Compound-Black  | 130.34 | mg              |          | Epoxy Phenol Resin           | proprietary data |        | 1.0427   | mg              |
|                      |        |                 | Supplier | Carbon Black (C)             | 1333-86-4        |        | 1.3034   | mg              |
|                      |        |                 | Supplier | Aluminum Hydroxide (Al(OH)3) | 21645-51-2       |        | 7.8204   | mg              |
|                      |        |                 | Supplier | Fused Silica (SiO2)          | 60676-86-0       |        | 104.272  | mg              |
|                      |        |                 | Supplier | Ortho-Cresol Novolac Resin   | 29690-82-2       |        | 15.6408  | mg              |
|                      |        |                 | Supplier | Silica Crystalline (SiO2)    | 14808-60-7       |        | 0.2607   | mg              |
| Plating              | 3.34   | mg              | В        | Bismuth (Bi)                 | 7440-69-9        |        | 0.02     | mg              |
|                      |        |                 | Supplier | Tin (Sn)                     | 7440-31-5        |        | 3.32     | mg              |
| Wire Bond - Au       | 0.63   | mg              | Supplier | Gold (Au)                    | 7440-57-5        |        | 0.63     | mg              |

Substance Instructions: [A] select the Level (JIG A, JIG B, Requester or Supplier) [B] select the substance category (JIG or Requester) or enter a value (Supplier). [C] select the substance (JIG) or enter the substance and CAS (Other). [D] select a RoHS exemption, if applicable [E] enter the weight of the substance or the PPM concentration [F] Optionally enter the positive (+) and negative (-) tolerance in percent (Note: percent tolerance values are expected to cover a 3 sigma range of distribution unless otherwise noted).